JINAV: Journal of Information and Visualization *ISSN: 2746-1440 (online)*
Vol. 4 No. 2 (2023)
https://doi.org/10.35877/454RI.jinav2257

UI/UX Development Using Figma based on Inclusive Design

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Abstract

The existence of User Interface (UI) and User Experience (UX) Designer has been highly increasing and needed in recent times. One of the reasons is that many companies are starting to use Website and Mobile Application all of these actions occurred in a convincing way that attracted users, however, each of them support the objective of business development. In answering this problem, knowledge of UI/UX is needed in terms of conduction for using it. Therefore, needed designer must use several processes in the research method that the author uses, namely empathize, define, ideate, prototype, and test. The purpose for designers, there are many resources to fulfil the lack of education and to prevent working hard, it assists designers in working and creating for all frameworks and inclusive design. Also, the contributes to designers with a practical framework, aligning with industry standards, and fostering a user-centric approach. It ensures digital products are inclusive, promoting diversity, and advancing design in the technology industry. In addition, how a designer can incorporate their unique ideate for building Websites and Mobile Applications. The result of the Design Thinking method in this research is to expertly improve the user's experience better than before. And the result application was efficient based on the participants rate are successful effective. Satisfying based on overall rate 98.4% after see this and when using the application.

Keywords: User Interface, User Experience, Inclusive design.

Received: 5 November 2023 Revised: 17 December 2023 Accepted: 28 December 2023

1. Introduction

In the modern age of technology, the concept of accessibility in UI/UX design has moved beyond aesthetic consideration to become a social and legal need(Cajander et al., 2022). As the digital landscape continues to expand, it is essential to cater to the diverse needs of users, including those with disabilities.

Every startup for UI/UX designers may lack the necessary training in accessibility practices. This paper is intended to provide OEMs and researchers with guidance on what actions need to be taken to more effectively incorporate data-driven methods into the UX design process to develop in a user- centric manner(Gibbs et al., 2015). Especially To achieve the second purpose, the construction of the platform, the Figma tool was selected, to develop a horizontal prototype, to avoid those major developments in terms of programming are made and not used. Therefore, it is increasingly important and difficult to provide customers with a user interface that meets their needs(Bastos et al., 2023).

Deceptive design was first identified by UX designer Harry Brig null in the early 2010s. Initially, Brig null used the term 'dark patterns' to indicate "tricks used in websites and apps that make you do things that you didn't mean to, like buying or signing up for something" (Conca, 2023). In this case, User Experience Design and Usability at the Hussman School of Journalism and Media. This is a basic and broad overview class(Yu et al., 2020).

The aims of the research are both ways. First, it figures out the needed point for practical insights and guidelines that empower UI/UX designers to engage accessibility conditions by using Figma, a widely adopted design tool. The basic

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components of the class include “Weekly UI” challenge student chance to be inventive and creative by working on their UI design skills week after week(Yanfi & Nusantara, 2022).

The methodology used in this research with quantitative methods is better than qualitative methods. The quality research involves interviews and surveys with UI/UX designers, developers, and individuals with disabilities to improve insights into their experiences and challenges and include UI/UX design with accessibility using Figma. Based on the interviews and themes identified above, researchers developed user stories that depicted typical situations where a user would benefit(Ouyang et al., 2021).This method gives a more comprehensive understanding of the technical aspects of Figma's capabilities in assisting accessible design(Stagg et al., 2023).

The goal of this study is to evaluate the UI/UX designers and Pump mobile application user interface usability and to assess if it is (1) efficient, (2) effective, and (3) satisfying based on the overall user experience the next section presents the review of related literature on usability testing methodologies. The research design and methodologies used in this chapter are discussed.

2. Material and Methods

Design thinking is said to live at the intersection of desirability (people), viability (business), and feasibility (technology).

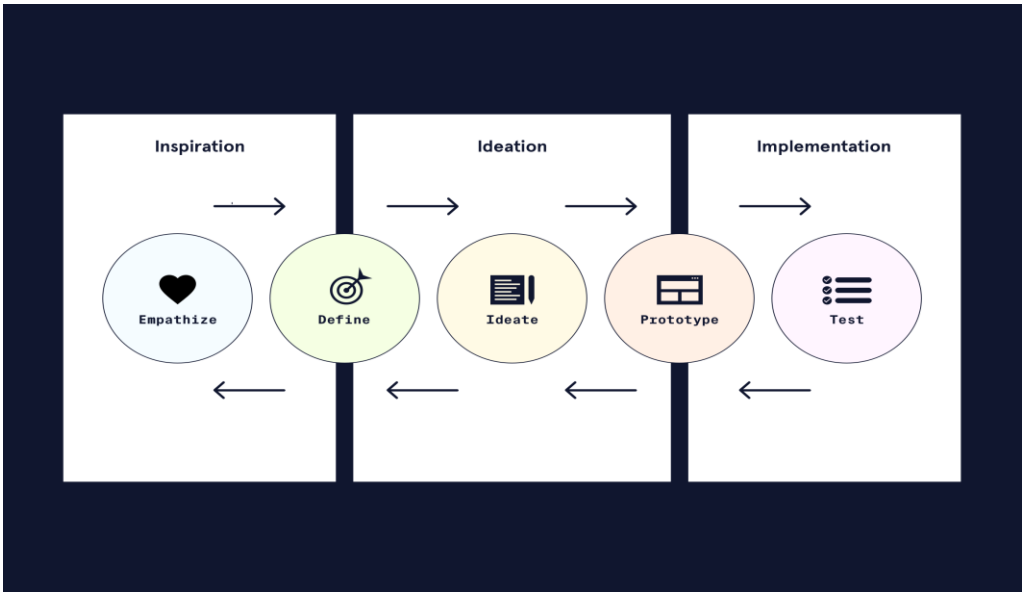

Fig. 1. Design thinking methods

According to Fig.1, The design thinking as a problem-solving approach, the flow begins with the empathize phase, where designers immerse themselves in the users' experiences, seeking a profound understanding of their needs and challenges. This empathetic exploration then transitions into defining the core problem, distilling insights gained during empathizing into a clear problem statement and extra effort in terms of the interaction for the user(Medjden et al., 2020). Ideation follows, fostering a creative space where diverse solutions are generated, encouraging both quantity and quality. Prototyping takes these ideas and transforms them into tangible representations, providing a hands-on experience of the proposed solutions. Finally, testing involves presenting these prototypes to users, collecting feedback, and refining the solutions iteratively. This cyclical nature of design thinking ensures a user-centric and adaptable approach, where each phase informs and refines the subsequent ones, ultimately leading to innovative and human-centered solutions(Escanillan-Galera & Vilela-Malabanan, 2019).

According to Fig.2, The collection of data source there are Primary data sources involve gathering firsthand information directly from relevant stakeholders. We focused on organizations that operate in the design field and create tailor-made digital solutions for external customers(Trocin et al., 2023). In the context of inclusive design with Figma, primary data sources may include conducting interviews, surveys, or observations with key participants.

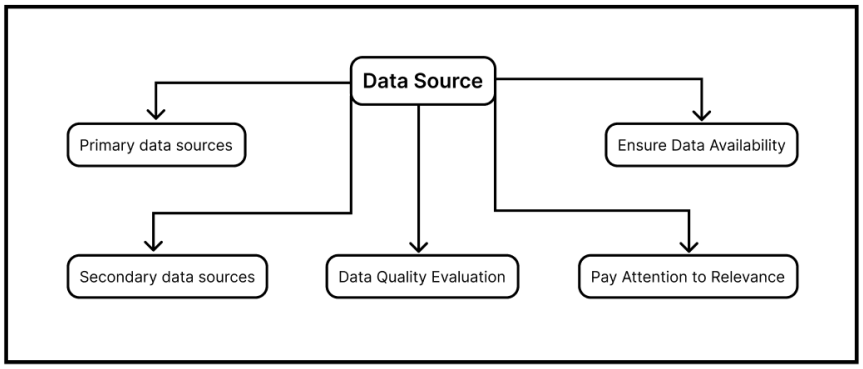

Fig. 2. Data source

Secondary data sources involve leveraging existing information and research conducted by others. And although our methodology looks promising in the climate science environment(Gibbs et al., 2015). These sources provide valuable context and background information on the topic.

This stage involves assessing the credibility, relevance, and reliability of the gathered data to ensure its suitability for informing the inclusive design framework. UX/UI evaluation of the metaverse build was significantly higher than that of the virtual reality build(Jeong et al., 2022).

This step ensures that the data you intend to use is accessible and readily available for analysis and integration into your inclusive design framework. Over time, as the volume increased, one would expect greater citation to virtual designs and therefore to design patents(Janis et al., n.d.).

It's crucial to ensure that the data you gather or reference directly aligns with the goals and objectives of your project, this has been required, in order to support clinical workflow and improve situational awareness in clinical decision making(Miia et al., 2022). particularly in the context of improving accessibility in UI/UX design with Figma.

Table 1. Issac and Michael's table for determining the number of samples from a certain population with an error range of 1%, 5%, 10%.

Number	Sample		
	1%	5%	10%
20	19	19	19
40	38	36	35
60	55	51	49
80	71	65	62
100	87	78	73
120	102	89	83
140	116	100	92
160	129	110	101
180	142	119	108
200	154	127	115

$$S = \frac{\lambda^2.N.P.Q}{D^2(N-1)+\lambda^2.P.Q}$$

Information:

λ^2 with dk = 1

Level of error impossible 1%, 5%, 10%.

P = Q =0,5. D= 0,05. S = number of samples

3. Results and Discussion

The evaluation was done in august 2023. There were 200 participants, 62% male and 38% female and all participants were in the same age range 18-50. They all have mobile phone include disability as the survey they know how to use internet in their mobile phone. The total population consist of 47 staff and 153 students. The result shows that there is 98.4% success rate in the tasks done by the participants indicating that the mobile application works, and it is effective shown in Table 2.

Table 2a. Useful of mobile application

Participants	Completely satisfy	Satisfy	Good	Not satisfy	Worst
Quantity	86	79	29	2	2
Average Rate completion	44.3%	39.6%	14.5%	0.8%	0.8%

Table 2b. User friendly of mobile application

Participants	Completely satisfy	Satisfy	Good	Not satisfy	Worst
Quantity	72	77	41	5	1
Average Rate completion	35%	46.5%	15%	3%	0.5%

Table 2c. Flow of using mobile application

Participants	Completely satisfy	Satisfy	Good	Not satisfy	Worst
Quantity	74	76	40	6	1
Average Rate completion	37.3%	38.5%	20%	3.2%	0.3%

Table 2d. Feedback from participants

Participants	Completely satisfy	Satisfy	Good	Not satisfy	Worst
Quantity	63	58	49	24	5
Average Rate completion	31.9%	29.2%	24.6%	12.2%	1.8%

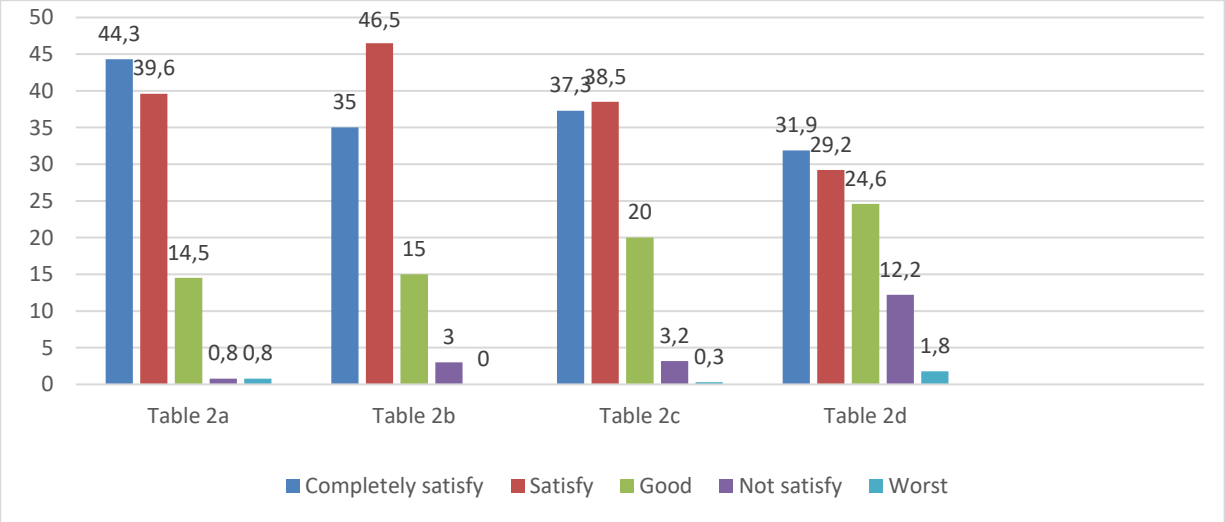

Fig. 3. Flow chart of application

According Fig. 3, This shown the data from the 4 survey questions. The table 2a show participants rate for the 44.3% completely satisfy, 39.6%, satisfy, 14.5%, good, 0.8% not satisfy and 0.8% worst. The table 2b show participants rate for the 35% completely satisfy, 46.5%, satisfy, 15%, good, 3% not satisfy and 0 % worst. The table 2c show participants rate for the 37.3% completely satisfy, 38.5%, satisfy, 20%, good, 3.2% not satisfy and 0.3% worst. The table 2d show participants rate for the 31.9% completely satisfy, 29.2%, satisfy, 24.6%, good, 12.8% not satisfy and 1.8% worst. And all data were same as the Fig. 3.

According to Fig.4, The application's user experience begins with a splash screen that showcases its imaginative design and provides guidelines for use. Click the next button and enter your number to receive an ID code that will allow you to use the application. Additionally, if you haven't received the ID number, please resend to receive it once again. After that, fill out your identity information for us as a new registered the user, and including your finished name, date of birth, gender, and email. At last, you may take satisfaction in shopping with a wide selection of sneakers.

According to Fig.5, This purchasing flow is our application's sneaker. To access the home page with all of its options for buying shoes, first log in. Next, pick your choice, add it to the shopping cart by selecting its details (information, size, colour, etc.). And then go to the cart, pick which items you want to purchase again, and click "Order." In this case, the customer must fill out their address and select their preferred method of payment. Additionally, you may rapidly add other payment methods. After that, a notification asking you to confirm your order will appear. Click "Yes," and your transaction will proceed. You can then view your product's final delivery map on the store page.

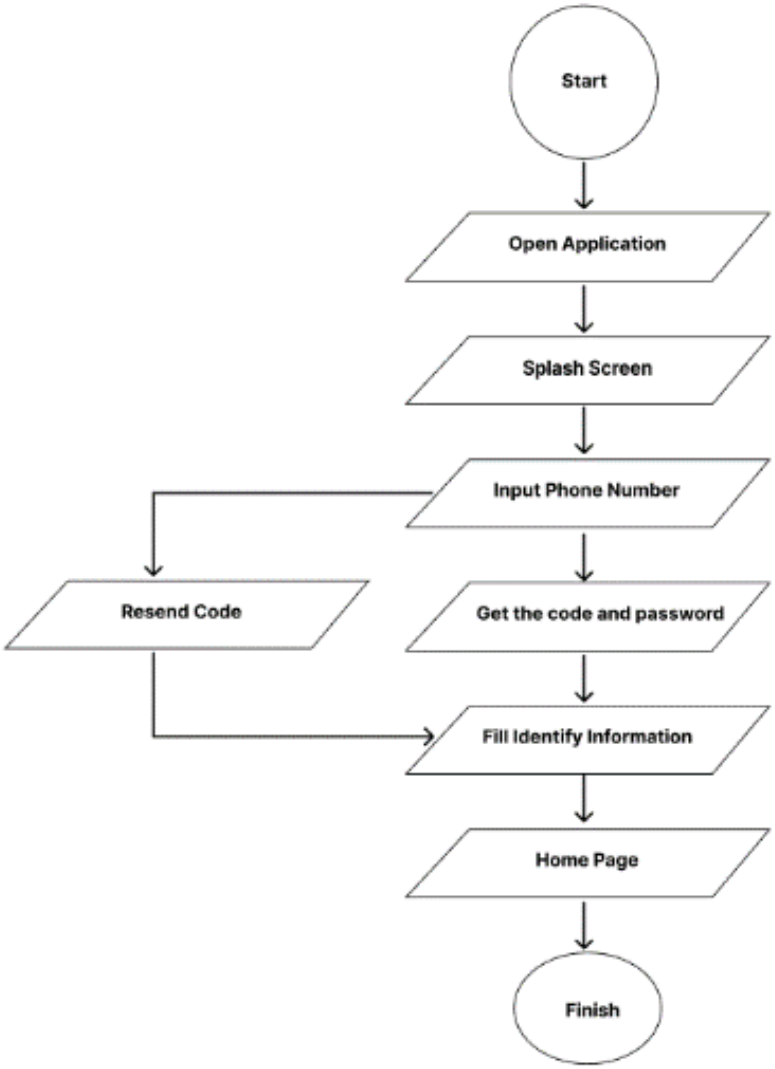

Fig. 4. Flow of login & register application

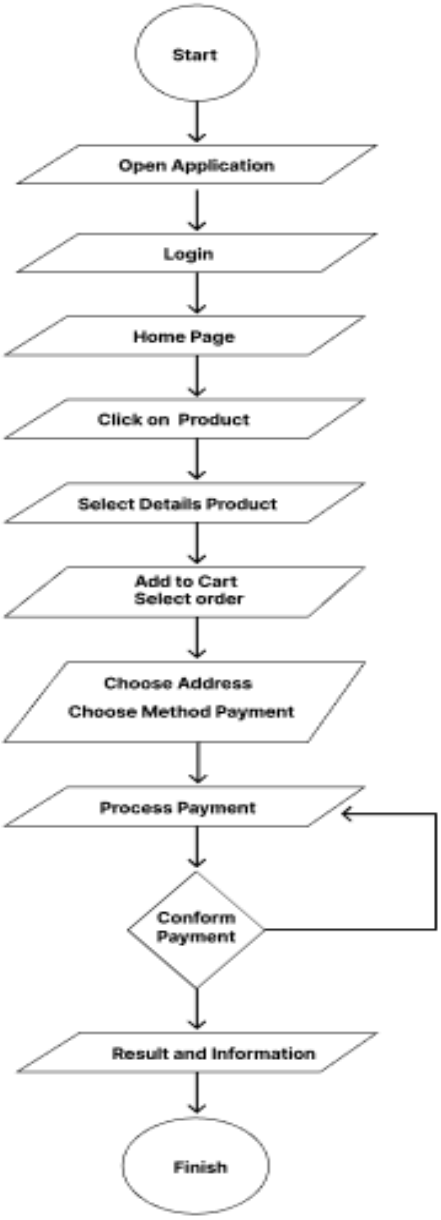

Fig. 5. Flow of purchase products in application

4. **Conclusion**

In this study the effectiveness, efficiency and user satisfaction and experience for the mobile application were evaluated. The result shows this work has been the first step in extending our understanding of UX practice and learning. To sum it up, the significant conclusions according to our study as addressing the challenges of "Accessibility in UI/UX Design with Figma: A Framework for Inclusive Design." The developed framework emphasizes collaboration, could not identify any approaches that directly address UX management.

The suggested framework also addresses the challenges of concurrent UI design and programming, emphasizing continuous user involvement and the need for experienced designers. It underscores the importance of education and

ongoing resources for UI/UX designers to stay updated on accessibility practices. The integration of data-driven methods into the UX design process is highlighted, offering guidance for OEMs and researchers.

The recommendation was examining the ways to best utilize Figma's real-time collaboration capabilities to promote inclusive design partnership. Look on approaches to improve accessibility in concurrent design environments so that different types of designers may participate in the design process without any problems. And investigate the integration of AI-driven tools within Figma to automate accessibility evaluations. Explore how artificial intelligence can assist designers in identifying and addressing accessibility issues in real-time, streamlining the design process and promoting inclusivity from the early stages of UI/UX development.

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